The India Rubber World Index

VOLUME LIII
October, 1915, to March, 1916

VOLUME LIV
April, 1916, to September, 1916

NEW YORK:
THE INDIA RUBBER PUBLISHING CO.
1916.

A

Accelerator, Vulcanization 115
Acceptances: Circulars, Regulations and Informal Rulings of the Federal Reserve Board ..... (*Book Review*) 664
Acken, John (Portrait and Sketch) 489
Acreage, Rubber, British Malaya 381
Statistics, World's 382
Adamson Mold Presses, Two New *120
Tread Mold *21
Aeroplanes, Model, Driven by Rubber Strands. *237
Rubber in the Construction of *463
Tires 605
Africa, British South, Rubber Import Statistics 88
French, Preparation of Rubber in 505
German West, Hevea Export Statistics 256
German West, Rubber Planting Notes 256
Portuguese West, Hevea Export Statistics .. 256
Portuguese West, Rubber Planting Notes ... 256
African Rubbers, Researches on 114
Agricultural Bulletin of the Federated Malay States ..... (*Book Review*) 295
Air Hoist, Utility *661
Akron Rubber Trade 33, *84, 141, *192, 250, 308, 372, *432, *497, *561, *620, *679
Alden, Frederick J., Death of 240
Amazon, Optimism of ..... (*Editorial*) 2
Rubber Industry of the ..... (*Book Review*) 175
Rubber Situation in 93
American Export Statistics, 1915 273
Rubber Exports in 1915 ..... (*Editorial*) 273
Ampul, "First Aid" Iodine *16
Amsterdam, New Waterproof Clothing Factory in 198
Analysis of Power Costs 358
Andrews, Benjamin L., Death of 357
Aniline Oil, Manufacture of *167
Aniline Plant, Assembly of 167
Announcements, Rubber Club 194
Antimony, Golden Sulphide of, Select Methods of Analysis of 598
Anti-Splasher for Sink, Durst *418
Apparatus for Laboratory *64, *116, *225
Apron Feed for Mills, Hale's 601
Laboratory and Patient's Bib, Rubber-Coated *298
Aqua-Phone, The 236
Arch Support, Anterior-Metatarsal *609
Arens, Dr. P. "Handleiding Voor De Bereiding Van Rubber" ..... (*Book Review*) 351
Armor-Tred Sole, New 72
Arnold, Charles H., Death of ..... (*Portrait*) 299
Mrs. Charles H., Death of 24
Asbestos and Its Embargo ..... (*Editorial*) 462
Ashcroft, R. W. ..... (*Portrait and Sketch*) 246
ASSOCIATIONS—
Associated Manufacturers of Electrical Supplies, Meeting of 138
National Association of Cotton Manufacturers, Semi-Annual Meeting 28
Rubber Trade Association of New York Adopts New Rules 18
Rubber Trade Association of New York, Annual Meeting 137
Austin, George E., Death of 612
Auto Brush, "Kleenway" *355
Auto Clock, Lewis "Nojar" Rubber Retained. *172
Auto Lamp Dimmer, Monarch Adjustable *174
Auto Robe, "Frunt-Seet" *420
Auto-Tent, Handy *546
Auto Wind-Shield Cleaner, "Clear-O-Scope" .. *481
Autographic Friction Test of Hose and Belting *591
Automatic Control of Time, Temperature, and Exhaust in Tire Vulcanizers *530, *531
Automobile Camp Bed and Tent *419
Construction, Hard Rubber in 405
Engineers, Society of, Proposed Rubber Standards 229
Fuel Situation, The ..... (*Book Review*) 416
Show for 1916 194
Show, New York's Sixteenth Annual *222
Steering Wheel *173
Tire Fabric, Moisture Content of, and Its Influence upon the Weight and Tensile Strength 549
Tire Fabrics, Standardization of (*Book Review*) 416
Aviaphone, Turner's *354
Aylsworth, J. W. ..... (*Portrait and Sketch*) 81

B

Bag, Thermo Steaming *296
Bailey, Milton T., Death of ..... (*Portrait*) 23
Balance, Improved Analytical *64
Ball, "Ebonite" Bowling 126
Golf, Design *71
"F. & S. Colonel" *670
Invention *662
Tennis, "Goodrich Championship" *297
"Maderite" *125
"New Paramount" *668
Balloon Fabrics in Europe—II, Manufacture of. *399
Novelties *547
Valves, Toy *670
Balloons, Toy, Machine for Inflating *338
Toy *15
Toy, Rolling Beads on Necks of *661
Barium Salts in Vulcanized Rubber Goods, Determination of 352
Barker, Melvin Hazen, Death of 356
Barkley Bill, Pure Rubber and the. (*Editorial*) 647
Bassett, Charles Warren, Death of 422
Bat and Glove Protecting Cricketer's Knuckles *71
Batavia, Report of International Rubber Congress and Exhibition ..... (*Book Review*) 68
Bath Fixture, Watrous *174
Bathing Accessories, Rubberized *607
Cap Novelties *418
Cap and Protecting Towel, Waterproof *419
Cap Plaiting Machine 601
Caps, Machines for *341
Costume Novelties *355
Costumes, Fashions in *545
Shoe, "Unika Futfit" *480
Suit Case *355
Baxter, James E., Death of ..... (*Portrait*) 357
Bead Forming Machine, Kuentzel's *601
Wire Forming Machine 541
Bed, "Universal" Tubular *238
Bell, P. Carter, Death of ..... (*Portrait*) 678
Belt, Driving, for Motor Cycles 541
Benzol, Commercial Production of *470
Or Alcohol in Hydrocarbon Mixtures, Tests for 114
Bias Cutting Machine, New *20
Bib, Patient's and Laboratory Apron, Rubber-Coated *298
Bird and Game Calls, New Rubber *72
Birkenstein, L. ..... (*Portrait*) 361
Birmingham Pneumatic Tire Tread Machine .. *177
Block Planer, Freeman Improved *660
Boots (*See Footwear*).
Boston, Preparedness Parade (*Portrait of Major H. P. Ballard*) 488
Rubber Trade 31, 82, 139, 190, 248, *309, *371, *433, *497, *562, *563, *621, 680, 681
Bottle and Nipple, Nursing "Hygeia Cozy" ... *71
Medicine Drop, with Rubber Cap and Bulb. *296
Water, Rubin Duplex *297
Bourne, Lyman M. ..... (*Portrait and Sketch*) 135
Bowling Mat and Foot-Grip *669
Brake, Clutch, Magnetic and Safety Stop, for Mills *231
Brazil, Export Statistics 325
Export Statistics for 18 Years 263
Interesting Letters from 41
Rubber Export Statistics from Para and Manaos 153, 391, 455, 517, 579, 639, 699
Rubber Situation in *507
Rubber Tires Imported 44
Rubber Tires in 93
Situation in *630, *631
Brazilian Products, Interesting Exhibit of *500
Rubber, Proposal to Reduce Tariff on 690
Breakspear, F. C., Death of 612
Breathing Apparatus, Vacuum *482
British Gold Coast, Export Statistics 148
Guiana, Hevea in *508
Guiana, Rubber and Balata in 689
Guiana, Rubber Plantations in *631
Guiana, Tapping Statistics 508
Honduras, Chicle Export Statistics 630
Malaya, Acreage under Rubber 381
Malaya, Rubber Export Statistics for 10 Years 381
Solid Tire Rim Standards and American Sizes 474
South Africa (*See Africa*).
Standard Solid Tire Rims *604
Brush, Auto, "Kleenway" *355
Bristles, Vulcanizing, Set in Rubber *600
Combination Shaving and Massage *126
For Painting, Rubber Cemented *608
"Heldtite" Shaving *174
Bryant, Richard S., Death of 300
Burette Reading Device *346
Burke, James W., Death of 422
Burma, Rubber Export Statistics 91
Burner, High Temperature *597
Butadiene, Polymerization of 64
Buyers' Directory for the Wholesale Drug, Chemical and Allied Trades, Stubbs' (*Book Review*) 295

C

Cable, New, for Motor-Driven Conveyances ... *71
Strippings Are Welcome, Where. (*Editorial*) 218
Cables, Market for 694
Calender and Mill Rolls, Cooling by Refrigeration *534
Controllers, Rubber *542
Kearns Multiple Friction *479

*Illustrated.

Calenders, Automatic Electrical Control for...*413
Motor-Operated Screwdown for..... *65
Seiberling's Friction.....*341
Calorimeter, Improved.....*346
Campbell, V. D., Lieutenant-Colonel David C., Death of..... 422
Canada, Cotton Fabric Import Statistics...100, 329
Cotton Fabric Imports..... 271
Rubber Import and Export Statistics, 103, 156, 213, 268, 326, 456, 519, 581, 641, 700, 701
Canadian Consolidated Rubber Co., Limited, Annual Report..... 425
Caney, Ashton W., Retires from Batavia Rubber Co..... 363
Caoutchouc and Its Regeneration, Vulcanization of 658
College Course in.....*532, *533
From Isoprene..... 64
Cements, Rubber, in Leather Goods Manufacture..... 595
Census of Industry.....(*Editorial*) 525
Of 1914 and the Rubber Industry..... 335
Rubber Statistics for 1914..... 331
Ceylon and Malaya, Crop Percentages and Rainfall *201
Crop Percentage Statistics..... 201
Rainfall Percentages in..... 201
Ceylon, Plantation Acreage Statistics..... 91
Plantation Rubber Export Statistics..... 153
Rubber Conditions in.....*379
Rubber Export Statistics.....264, 321, 387, 454, 513, 579, 638, 695
Rubber, New Export Tax on....(*Editorial*) 53
Chain, Silent Drive..... *22
Challiner, C., Death of..... 612
Charity for None and Welfare for All, With (*Editorial*) 162
Chemical Annual for 1913, Van Nostrands (*Book Review*) 123
Calculations ..... (*Book Review*) 175
Engineering, Scholarship in..... 411
Exposition and Society Meetings, National. 655
Industries, National Exposition of..... *13
Patents, Other.....169, 225, 290, 597, 658
Technology and Analysis of Oils, Fats and Waxes ..... (*Book Review*) 175
Treatment of Rubber....169, 225, 290, 346, 412, 469, 537, 596, 658
Chemicals and Compounding Ingredients, Effect of War on—Normal vs. War Prices.. 110
Market for Compounding Ingredients....31, 100, 158, 206, 270, 328, 394, 459, 522, 584, 644, 645, 704, 705
Chemists, Rubber, What They Are Doing..11, 63, 114, 168, 224, 289, 344, 410, 467, 535, 596, 656, 657
Chicago Rubber Trade.....86, 142
Chicle Cutting Machine.....*662
Chili, Imports of Rubberized Fabrics..... 44
Chin Mask and Frown Band.....*668
Church Telephones for Deaf Worshippers.... *70
Churn, Davidson Latex Coagulating.....*601
"Clear-O-Scope," Auto Wind-Shield Cleaner.*481
Clock, Auto Lewis "Nojar" Rubber Retained.*172
Cloth Cutter, Electric.....*232
Measurer, Standard.....*413
Clothing (*See Raincoats, Waterproof, etc.*).
Coat, Camden Waterproof..... 172
"Gnidroc" for War Purposes.....*238
New Thresher Trench.....*238
Pivot Sleeve for Golf.....*480
Weatherproof *70
Clutch-Brake, Magnetic, and Safety Stop for Mills *231
Clutch Speed Counter, Veeder.....*296
Coagulants, New, for Rubber Latex..... 468
Coagulation, New Method of..... 345
Coaster, "Bi-Plane" Sidewalk.....*298
Cochin China, Planting Rubber in.....*649, 650
Color of Rubber, Uniform..... 168
Colt, Le Baron C., Death of.....(*Portrait*) 485
Colt, Senator Delivers Notable Address..... 26
Comb, Hair Tonic..... *72
New Rubber, with Staggered Teeth..... *70
Commercial Synthetic Rubber.....(*Editorial*) 162
Compounding Ingredients, Dearth of.(*Editorial*) 105
Machine, New Dry.....*660
Reserves, Rubber and.....(*Editorial*) 105
Compression Inner Tube.....*605
Concentric Wiring System.....*531
Condensation Products..... 114
Condensite, J. W. Aylsworth, the Inventor of. 79
Conductor, "Realflex" Armored.....*481
Conner, William Andrew, Death of (*Portrait*) 181
Constantinople, Exports of Waste Rubber.... 571
Consumption of Rubber in Great Britain, France and Russia..... 376
Contest, Crude Rubber Guessing (*Editorial*) 105
Contraband Rubber Shipments..... 171
Controllers, Rubber Calendar.....*542
Cook, Otis R.....(*Portrait and Sketch*) 306
Cooke, George Kissam, Death of..... 422
Cord Tires and Cord Tire Fabrics.....*527, *529
Core, Cole's Collapsible.....*602
Core, Collapsible, for Hot Water Bottles.....*600
Cotton Fabric Import Statistics.....139, 329
Fabric Market....50, 100, 159, 207, 271, 329, 395, 458, 522, 584, 644, 703
Cotton Fabrics and Rubber Products, Methods of Testing.....*566
Manufacturers, National Association of, Semi-Annual Meeting..... 28
Coupling for Mill Drives, Extensible.....*659
Hose *22
Nuttall Flexible..... *66
Covering Hose with Lead Prior to Vulcanizing *414
Crude Rubber Distribution.....(*Editorial*) 274
Rubber During 1915.....(*Chart*) 261
Rubber Guessing Contest.....(*Editorial*) 105
Rubber Market.....46, 96, 151, 208, 263, 320, 386, 450, 512, 575, 635, 694
Cue, Pneumatic, for Pool.....*420
Cup, Vacuum, New Uses for.....*546
Customs Rulings.....511, 611
Cutter, Miller's Bias Fabric.....*476
Rubber Scrap, "Giant" Rubber.....*539
Cutting Machine, Gum Chicle.....*662
New Bias..... *20

D

Dam, Buff Rubber, S. S. White..... 355
Dater, "Perfected," New Features in.....*125
"Radio" *547
Davenport, George F., Death of..... 81
Deaf Worshippers, Church Telephones for... *70
Deafness—Rubber Shock Absorbers for Ears.. *72
Deane, Edwin Wesley, Death of..... 421
"De Luxe" Rubber Goods..... *15
Demonstrative Publicity.....(*Editorial*) 397
Demountable Motor Trucks.....*606
Rim and Wheel, Parker.....*605
Rim History..... 472
Dental and Surgical Inhalers in New Forms.. *70
Appliance, Improved.....*480
Designs, Trade-Marks.....95, 150, 205, 259, 260, 319, 384, 385, 445, 510, 511, 573, 574, 633, 634, 692, 693
Determination of Barium Salts in Vulcanized Rubber Goods..... 352
Devine Co.'s Plant, The J. P., Enlargement of.*243
Devine, Joseph P.....(*Portrait and Sketch*) 673
Devine's Spreading Machine.....*232
"Dictatorship, England's".....(*Editorial*) 1
Dimmer, Auto Lamp, Monarch Adjustable....*174
Sof-Lite Headlight.....*353
Dipped Goods, Heated Form for.....*232
Dipping and Drying Machine.....*478
Machine for Making Nipples.....*178
Machine, New *541
Directory, Hendrick's Commercial, of the United States .....(*Book Review*) 69
Dirigible, Our New Navy.....*401
Diseases, Guarding Against, Rubber's Service in Quarantine *7
Dish Washing Device, New.....*236
Dividends, Rubber Company.....25, 75, 131, 182, 242, 362, 423, 489, 553, 613, 672
Dodge, James Mapes, Personal Reminiscences of ..... (*Book Review*) 664
Dodge, James M., Death of.....(*Portrait*) 180
Drive, Silent Chain..... *22
Driving Belt for Motorcycles..... 541
Druggists' Sundries List Adopted by United States Customs Service..... 369
Dry Heater, Passing of the.....(*Editorial*) 332
Dryer, Rotary and Screw Press for Rubber Waste *231
Rotary Vacuum, for Rubber Scrap.....*291
Duryee, A. R., Death of..... 352
Dutch East Indies—Netherlands East India, Acreage Statistics 257
Rubber Planting Notes.....*257
Dutch Guiana, Rubber Situation in..... 91
Rubber Trade in 689
Dyes, Doing Without.....(*Editorial*) 161

E

Ear-Phone, Electric Lorgnette.....*420
Ears, New Rubber Shock Absorbers for..... *72
East Indies, Dutch—Netherlands East India, Rubber Planting Notes *257
Eberhart, Everett G., Death of..... 24
Ebonite Substitute 115
Edging Plaiter, Wills Rubber.....*599
Edison and the Electric Incandescent Lamp (*Portrait*) 77
EDITORIALS—
Amazon, Optimism of..... 2
American Rubber Exports in 1915..... 273
Asbestos and Its Embargo..... 462
Cable Strippings Are Welcome, Where..... 218
Census of Industry..... 525
Ceylon Rubber, New Export Tax on..... 53
Color in Tires 398
Commercial Synthetic Rubber..... 162
Compounding Ingredients, Dearth of..... 105
Crude Rubber Distribution..... 274
Crude Rubber Guessing Contest..... 105
Demonstrative Publicity 397
Dyes, Doing Without..... 161
Employers' Patriotic Duty..... 588
England's Dictatorship 1
Fire Hazards in Rubber Factories..... 217
Golf Ball, The..... 275
Goodrich Good English..... 106
London, A Protest from..... 526
Minor Editorials.....106, 162, 218, 332, 398, 588, 648
Mountain of Scrap the War Is Making! What a 2
Overseas Trust to Insure Neutrality, An... 54
Passing of the Dry Heater..... 332
Pessimistic Prophecy, A..... 461
Practical Patriotism 398
Preparedness and the Rubber Trade..... 273
Preparedness and Rubber 331
Preparedness—Looking Backward..... 587
Prices, Higher, and When..... 161
Processional Efficiency 461
Pure Rubber and the Barkley Bill..... 647
Rubber and Compounding Reserves..... 105
Rubber Club Day 217
Rubber Club's New President, The..... 274
Rubber Goods? Will There Be a Dumping of 54
Rubber Importers, Growing Ranks of..... 54
Rubber Manufacture and Health..... 106
Rubber Prices When Peace Is Restored.... 588
Rubber Stamp, The Universality of the.... 461
Rubber Stratagems of the Blockade..... 647
"Sculptured" Tread, The Triumph of the.. 218
Season's Greetings, The..... 161
Septennis Syntheticus, The..... 398
Solvent Naphtha Problem, The..... 397
Strike Epidemic, A..... 526
Tariff Commission, The Proposed..... 275
Three Hundred Millions in Rubber..... 331
Tires and the Rubber Supply..... 217
Tire Texts 332
Unprofitable Infringement No Excuse..... 397
With Charity for None and Welfare for All 162
EDITOR'S BOOK TABLE—
Acceptances: Circulars, Regulations and Informal Rulings of The Federal Reserve Board 664

*Illustrated.

670.5 I38
U.S.3954 c.1

EDITOR'S BOOK TABLE—(*Continued*).
Agricultural Bulletin of the Federated Malay States 295
Automobile Fuel Situation, The..... 416
Chemical Calculations 175
Chemical Technology and Analysis of Oils, Fats and Waxes 175
Die Technologie Des Kautschuks..... 123
Dictionary of Textiles..... 295
Exporting, Practical 234
"Financier Rubber Share Handbook, The" 13, 543
Fundamentals of a Cost System for Manufacturers 664
Green Book for Buyers..... 483
Handbook of Weaves..... 234
Hendrick's Commercial Directory of the United States 69
"India Rubber and Balata Belting as Conveyor and Power Transmission Belts".... 543
"Large Single Versus Dual Solid Tires for Rear Truck Wheels" 543
"Legacy of the Exposition"..... 610
List of Para Exporters and Importers, 1915. 416
Medical Who's Who, 1916, The..... 483
Oil, Paint and Drug Reporter Green Book for Buyers 123
Peeps at Many Lands: South America..... 416
Personal Reminiscences of James Mapes Dodge 664
Physiological Principles for Determining Value of Various Rubber Tapping Methods.....(*Prof. Dr. Hans Fitting*) 234, 483
Practical Safety Methods and Devices..... 664
"Preparing Plantation Rubber for the Market" 543
"Railway Expansion in Latin America".... 610
Report of The International Rubber Congress and Exhibition, Batavia..... 68
Rubber Companies' Position..... 123
Rubber Growers' Association, 1915, Transactions of 295
Rubber in Netherlands East India..... 123
Rubber Industry of the Amazon..... 175
Rubber Machinery.....(*H. C. Pearson*) 68
Rubber Producing Companies..... 610
Seventeenth Year Book and Annual Report of The Rubber Club of America, Inc..... 664
Standardization of Automobile Tire Fabrics. 416
Stock Exchanges (London and Provincial) Ten-Year Record 123
Stubbs' Buyers' Directory for the Wholesale Drug, Chemical and Allied Trades, 1916.. 295
Tariff Systems of South American Countries 664
"Technologie Der Kautschukwaren"..... 295
"Tractive Resistance to a Motor Delivery Wagon on Different Roads and at Different Speeds" 610
Trade Directory of Central America and the West Indies 175
Twentieth Century Russia and Anglo-Russian Review 123
Van Nostrand's Chemical Annual for 1913.. 123
Efficiency, Processional.....(*Editorial*) 461
Electric Cleaner with Soft Rubber Brush.....*174
Storage Battery in the Motor Car.....*589
Switch, Automatic, for Automobiles.....*608
Electrical Supplies, Associated Manufacturers of, Meeting 138
Electrician's Glove, Aetna.....*545
Electricity, Welding Rims by.....*473
Employes, Keeping Contented.....*565
Employers' Patriotic Duty.....(*Editorial*) 588
Endlich, Rudolph, Death of..... 358
"England's Dictatorship" .....(*Editorial*) 1
English, Goodrich Good.....(*Editorial*) 106
Envelope Sealer, Standard.....*547
Europe, Some Rubber Interests in.....36, 88
European Pneumatic Tire Sizes..... 404
Rubber Trade After the War, The..... 465
Trade Notes 378, 439, 685
Exercising Apparatus, Indoor.....*173
Exhibit of Brazilian Products, Interesting....*500
"Exide" Battery Service Test.....*340
Export Tax on Ceylon Rubber, New (*Editorial*) 53
Exporting, Practical.....(*Book Review*) 234
Exposition, Chemical and Society Meetings, National 655
Chemical Industries, National..... *13
"Legacy of Exposition".....(*Book Review*) 610
Extraction Apparatus, Electrically Heated.....*116

F

Fabric, Balloon, in Europe—II, Manufacture of *399
Proofed Rubber Goods, Machine for Trade-Marking *348
Strip Machine, Suber's.....*601
Tester, Scott *65
Tire, Tests Shown by Lantern Projection...*429
Factories, Rubber, Fire Hazards in (*Editorial*) 217
Far East, Comparative Distances..... 124
Plantation Rubber Export Statistics..... 153
Rubber Routes from the.....*124
Federated Malay States, Rubber Export Statistics 153, 210, 263, 321, 387, 454, 513, 579, 638, 695
Rubber Planting in.....*381
Filter Reservoir, Constant Level.....*225
Rings, Rubber..... *64
"Financier Rubber Share Handbook" (*Book Review*) 543
Financing Imports of Plantation Rubber.....*336
Finger Cot, "Unika" Rubber.....*668
Protector, Rubber for Sewing.....*298
Fire Hazards in Rubber Mills.....*219
Hazards in Rubber Factories....(*Editorial*) 217
Fires, Preventing Spreader-Room.....*693
Spreader, Causes of..... 286
Firestone Tire & Rubber Co., Changes in Organization..... 370
Firestone Tire & Rubber Co.'s "Homestead Outing"..... *34
Firestone Truck Tires Adapted to Railway Trucks.....*493
Fisk Rubber Co., New Buildings of.....*247
Fly Swatter, "Sanitary" Flexible Rubber.....*236
Flynn, Michael M., Death of.....(*Portrait*) 239
Football Pants with Elastic Band..... *72
FOOTWEAR—
Air Pressure Rolling Machine for.....*478
Army Sandal, New.....*481
Boot and Shoe Sole Rolling Machine.....*178
Boot Top Laying and Cutting Machine.....*349
Boots and Shoes, Foreign Import Duties on 408
Boots, Rubber, with Muffler Top.....*173
"Buddy" Inside Lace Pacs.....*297
Canadian Consolidated.....*125
Manufacture, Rubber, Processes of.....*347
Mourning.....*418
Outing Shoes, Six New..... *17
Price Lists, Rubber..... 228
Pump, Silk Outing.....*298
Red-Legged Boot for Santa Claus Trade... *71
Repairing Outfit.....*350
Rubber Boot for Severe Service..... *15
Rubber, Pressure Cure of.....*333
Shoe with Elastic Side Gore.....*174
Sporting Boots, Light Weight.....*353
Tan Military Rubber Boot.....*420
"Unika Futfit" Bathing Shoe.....*480
Vulcanizing Apparatus.....*233
Work Shoe with Rubber Heel and Rocker Bar.....*298
"Ford Air Break".....*298
Rear Wind-Shield.....*609
"Uniq" Running Board.....*608
Foreign Import Duties on Boots and Shoes.. 408
Rubber News 35, 87, 143, 194, 253, 312, 375, 437, 501, 568, 570, 624, 683
France, Consumption of Rubber in..... 376
Rubber Situation in.....*145, 197
Rubber Statistics.....325, 460, 521
Rubber Trade in.....314, 438, 569, 570, *685
French Cochin China, Rubber Tree Statistics 504
Indo-China, Rubber Cultivation..... 256
Frown Band and Chin Mask.....*668
Fruit Jar Ring, Scalloped..... 480
Fundamentals of a Cost System for Manufacturers.....(*Book Review*) 664

G

Gages, Caliper, for Rubberized Fabrics..... 541
Gammeter's Tire Machine Drum.....*231
Gardner Valve Packing Grinder..... *21
Garter, Sportsmen's Engraved..... 482
Gas Burners for Vulcanizing and Heating....*476
Gasolene Hose, "Thermoid".....*419
Gear Drive, Thropp Reduction.....*475
Guide-Mat, New.....*354
Generator, Sulphuretted Hydrogen.....*225
German Weeds, Rubber from..... 571
West Africa, Hevea Export Statistics..... 256
West Africa, Rubber Planting Notes..... 256
Germany, Rubber Trade in.....37, 89, *199, 255, 312, 377, 440, *503, 625
Waste Rubber Import and Export Statistics 316
Girdle, Treo Elastic.....*609
Glove, Aetna Electrician's.....*545
Tennis Racquet.....*608
Gloves, Batting and Bat, Protecting Cricketer's Knuckles *71
Workmen's Protective.....*547
Goggles, Rubber, Protection against Gases and Acids.....*126
Gold Coast, British, Export Statistics..... 148
Golf Ball, The.....(*Editorial*) 275
Design *71
"F. & S. Colonel".....*670
Industry, Development and Changes in.....*287
Invention.....*662
Statistics.....(*Editorial*) 275
Coat, Pivot Sleeve.....*480
Grip, "Satin".....*546
Tees, Something New in.....*482
Goodrich Co., The B. F.....308, 362, *432
"Championship" Tennis Ball.....*297
Gasolene Hose..... *15
Good English.....(*Editorial*) 106
Safety Respirator.....*296
Goodyear, Charles,.....(*Portrait*) 424
Tire Mileage Chart..... 445
Gottschalk, Louis, Death of..... 129
Grant Solid Tire Patent Litigation..... 430
Gray, Matthew Hamilton, Death of..... 24
Great Britain, Consumption of Rubber in..... 376
India Rubber Trade in.....35, 87, 143, 195, 253, 314, 375, 437, 501, 502, 568, 569, 624, 683, 685
Green Book for Buyers.....(*Book Review*) 483
Greetings, The Season's.....(*Editorial*) 161
Grinder and Mixer, Modern.....*659
Gardner Valve Packing..... *21
Guarantee, Rubber, New Form of..... 466
Guatemala, Rubber Tires in..... 690
Guiana, British, Balata Export Statistics..... 316
Rubber and Balata in..... 689
Hevea in.....*508
Guiana, Dutch, Balata Export Statistics..... 213
Rubber Situation in..... 91
Rubber Trade in..... 689
Guiana, French, Balata Export Statistics..... 213
Guianas, Rubber Situation in..... 315
Gun Bracket with Rubber Holders..... 126
Gun, New Grease..... 16
Gunn, J. Newton.....(*Portrait and Sketch*) 132
Gutta Percha, Botany and Source—III..... *3
Botany and Source—IV..... *55
Vulcanization of..... 12

H

Hair Tonic Comb..... *72
Trimmer, Every Man His Own..... *17
Hall, Edwin R., Death of.....(*Portrait*) 356
Halland, James T., Death of.....(*Portrait*) 551
Handbook of Weaves.....(*Book Review*) 234
"Handleiding Voor De Bereiding Van Rubber".....(*Book Review*) 351
Handles, Hard Rubber.....*126

*Illustrated.

Hard Compound, Applying, to Solid Tire Rims....*540
Hard Rubber in Automobile Construction.... 405
Hardy, William E....(*Sketch*) 76
Hat Cover, "Utility"....*546
Hawkins, Edmund R., Death of....(*Portrait*) 180
Head Bands, Elastic....*481
Headlight Dimmer, Sof-Lite....*353
Health, Rubber Manufacture and..(*Editorial*) 106
Heated Form for Dipped Goods....*232
Heater, Dry, Passing of the....(*Editorial*) 332
HEELS AND SOLES—
All Rubber Heel Liner....*125
Interchangeable Rubber Heel....*72, *609
Jones' "Never-Loosen" Rubber Heel....*669
Louis Rubber Lift for Heels....*608
"Monkey Grip" Rubber Sole....*126
New Armor-Tred Sole.... 72
"On the Level" Rubber Heel....*297
Phillips' "Military" Heels and Soles....*237
Pneumatic Rubber Heel....*419
Rubber Soles and Heels in the British Shoe Industry.... 409
"Textan" Sole.... 545
Universality of Rubber Heel.... 567
Henderson, William McLean, Death of.... 422
Hendrick's Commercial Directory of the United States....(*Book Review*) 69
Hevea and Hurricanes in Jamaica....*203
In British Guiana....*508
Potash from Hevea.... 11
Hill, Warren M., Death of.... 81
Hoggson & Pettis Manufacturing Co..(*Sketch*)*183
Holland, Export Statistics.... 625
Rubber Import and Export Statistics.... 90
Rubber Trade in.... 625
Hood Rubber Co., Annual Statement.... 362
"Welfare" Factory Work....*189
Hopewell, John, Death of....(*Portrait*) 357
Horses, Soaking and Poulticing Boots for...*172
Horseshoe, "Fruin-Tobin" Rubber Bar....*481
Hose and Belting, Autographic Friction Test of....*591
Hose Coupling.... *22
Goodrich Gasolene.... *15
Metal and Rubber for Gasolene....*482
Or Tubing in 500 Foot Lengths, Vulcanizing....*661
Protector, Rubber....*608
Radiator, "Testoid"....*354
Ringmeter Garden....*668
Triplexed Steam....*173
Hotchkiss, Justus S., Death of.... 129
Huebon, Otto P., Death of.... 551
Hunter Dry Kiln—A Comparison.... 294
Hurley, Edward N. (Extracts from "Trade Press and Problems of Business").... 339
Hutchinson, Charles K..(*Portrait and Sketch*) 492
Hydraulic Force Cup, McDermott....*607
Tire Vulcanizing Mold and Press....*122
Hydrometer, Rubber....*669

I

Ice-Packer with Rubber Bulb....*420
Ilcken-Down Coagulation Process....*628
Import Duties, Foreign, on Rubber Tires.... 342
Imports of Plantation Rubber, Financing....*336
Rubber of the United States, Statistics of... 44, 54, 98, 155, 213, 214
Importers, Rubber, Growing Ranks of (*Editorial*) 54
Rubber, Number in United States.... 54
Incorporations, New....26, 78, 135, 188, 243, 305, 366, 428, 491, 557, 616, 676
"India Rubber and Balata Belting as Conveyor and Power Transmission Belts" (*Book Review*) 543
South, Hevea Production.... 256
South, Rubber Export Statistics.... 91
South, Rubber Planting Notes.... 256
Indo-China, French, Rubber Cultivation.... 256
Industrial Methods, Modern, in Rubber Industry 117
Poisons in Rubber Manufacture....*107
Inflating Machine, Toy Balloon....*600
Inhalers, Dental and Surgical in New Forms *70
Inner Tube, Compression....*605
Rolling Machine....*477
Rolling Table....*662
Splice Vulcanizer....*413
Insulation, Rubber, Testing.... 536
Insuring Rubber Profits and Commissions.., 171
Interchangeable Rubber Heel, New.... *72
Intercontinental Rubber Co., Annual Report.. 80
Interesting Letters from our Readers.... 665
International Rubber Congress and Exhibition, Batavia, Report of....(*Book Review*) 68
Isoprene, Analytic Reactions of.... 535
Caoutchouc from.... 64
From Beta-Pinene.... 168
Italy, Yearly Rubber Import and Export Statistics 520, 521
Rubber Statistics....583, 643, 702

J

Jamaica, Hevea and Hurricanes in....*203
Japan, Rubber Export Statistics.... 378
Rubber Export Statistics 1914 and Prices.. 147
Rubber Trade 147, 378, 626
Japanese "Darky" Novelty....*237
Java, First Rubber Factory in.... 690
Plantation Rubber Export Statistics.... 153
Rubber and Gutta Percha Export Statistics 454, 513, 579
Jones, Henry S., Death of.... 552
Johnstone, William, Death of....(*Portrait*) 422
Judicial Decisions....511, 552, 611, 667
"Jumbo" Steam Jacketed Mixer....*231

K

Kelly-Springfield Tire Co.'s Annual Report... 301
Kelly, William J....(*Portrait and Sketch*) 363
King, Philip James, Death of.... 129
King, Thomas, Death of.... 357

L

Laboratory Apparatus....*64, *116, *169, *225, *290, *346, *412, *469, *537, 597
Apparatus and Supplies, Trade Publications 346
Label Gumming Machine, Trabue's....*291
La Dow, Jesse E....(*Portrait and Sketch*) 27
Landing Mat, Pneumatic Reversible....*353
Landolphe, Captain, Pioneer and Privateer (*Portrait*) 651
"Large Single Versus Dual Solid Tires for Rear Truck Wheels"....(*Book Review*) 543
Latex Coagulating Churn, Davidson....*601
Coagulation of.... 201
Concentrated Rubber.... 64
Feeding Hens on.... 39
Rubber, New Coagulants for.... 468
Lathe, Garvin Hard Rubber....*292
Lead and Zinc in Rubber Compounds, Electrolytic Method for.... 224
Leather Goods Manufacture, Rubber Cements in.... 595
Lewis "Nojar" Rubber Retained Auto Clock.. 172
Life-Saving, Rubber in the Service of.... *55
Linburg, Watson H., Death of....(*Portrait*) 239
Lindsay, J. K., Death of.... 240
Lithopone, Analysis of.... 536
Tests on.... 536
London, A Protest from....(*Editorial*) 526
Loom, Automatic Tire Fabric....*538
Loyd, John, Death of.... 81
Lyall, William, Death of....(*Portrait*) 239

M

Machinery Patents....*121, *178, *292
British and French.... 415
Other 122, 179, 233, 293, 350, 415, 479, 541, 602, 663
Rubber....(*Book Review*) 68
MACHINES, MILL APPLIANCES AND DEVICES—
Adamson Mold Presses, Two, New....*120
Tread Mold.... 21
Advance Washer Cutter....*476
Air Pressure Rolling Machine for Footwear.*478
Allen 10-Inch Tubing Machine....*348
Tube Skiving Machine with Motor Drive.*475
Apparatus for Impregnating Tire Fabrics..*414
Applying Hard Compound to Solid Tire Rims *540
Non-Skid Studs....*122
Apron Feed for Mills, Hale's.... 601
Feed for Mixers....*475
Automatic Electrical Control for Calenders.*413
Mixing Mills 293
Bathing Cap Plaiting Machine.... 601
Bathing Cap Machines....*341
Bead Forming Machine, Kuentzel's....*601
Bias Cutting Machine.... *20
Birmingham Pneumatic Tire Tread Machine.*177
Block Planer, Freeman Improved....*660
Boot and Shoe Sole Rolling Machine....*178
Boot Top Laying and Cutting Machine....*349
Calenders, Seiberling's Friction....*541
C. C. Pressure Regulator....*121
Core, Cole's Collapsible....*602
Coupling for Mill Drives, Extensible.... 659
Covering Hose with Lead Prior to Vulcanizing *414
Innersoles of Gem Type, Machine for....*179
Devine's Spreading Machine....*232
Dipping Machine for Making Nipples....*178
And Drying Machine....*478
Driving Belt for Motor Cycles.... 541
Dry Compounding Machine, New....*660
Dryer, Rotary Vacuum for Rubber Scrap...*291
Dykes' Reliner Mold and Vulcanizer....*599
Edging Plaiter, Wills Rubber....*599
Electric Cloth Cutter....*232
Tire Mold....*232
Fabric Strip Machine, Suber's....*601
Footwear Repairing Outfit....*350
Vulcanizing Apparatus....*233
French Press Vulcanizer for Tire Casings..*602
Gages, Caliper, for Rubberized Fabrics.... 541
Gammeter's Pneumatic Tire Core Revolving Machine....*349
Tire Machine Drum....*231
Gardner Valve Packing Grinder.... *21
Gas Burners, for Vulcanizing and Heating.*476
Heated Vulcanizing Press.... 541
Golf Ball Invention....*662
Gum Chicle Cutting Machine....*662
Hand Stitcher.... *22
Heated Form for Dipped Goods....*232
Heavy Duty Refining Mill, M. & W....*599
Hose Coupling.... *22
Hydraulic Tire Vulcanizing Mold and Press.*122
Tire Vulcanizing Mold and Press.... 350
Inflating Toy Balloons, Machine for....*338
Inner Tube Rolling Machine....*477
Rolling Table....*662
Splice Vulcanizer....*413
Installation of Wills' Overflow Trimmer....*177
Kearns Multiple Friction Calender....*479
Latex Coagulating Churn, Davidson....*601
Lathe, Garvin Hard Rubber....*292
Mandrel for Making Inner Tubes.... 350
Masticator, Price's Vacuum....*539
Meade's Multiple Spreading and Doubling Apparatus.... 67
Method of Making a Cord Carcass for Pneumatic Tires.... 350
Miller's Bias Fabric Cutter for Repairmen..*476
Boot and Shoe Repair Vulcanizer....*177
Mixer, "Jumbo" Steam Jacketed....*231
Modern Grinder and Mixer....*659
Molding Pneumatic Tires....*477
Motor-Operated Screwdown for Calenders.. *65
Motors, Alternating Current, Protection of. *66
Multiple Expansion Joints....*291
Nilson Tilting Wire Reel.... 66
Nipple Bead Forming Machine.... *67
Nuttall Flexible Coupling.... *66
Pneumatic Tire Casings.... 233
Price's Dipping and Vulcanizing Apparatus.*292
Vacuum Chamber Tubing Machine....*121

*Illustrated.

MACHINES, MILL APPLIANCES AND DEVICES—(*Continued*).
Pulley, Magnetic Separator....*177
Ramless Press Vulcanizer....*601
Reeling Bias Fabric Strips for Tires....*602
Reed Power Pattern Grader and Cutter....*121
Rolling Beads on Necks of Toy Balloons...*661
Rolls for Removing Wrinkles from Fabrics.*476
Royle's Multiple Tubing Machine Head....*67
Safety Stop and Magnetic Clutch-Brake for Mills....*231
Scott Fabric Tester....*65
Scrap Cutter, "Giant" Rubber....*539
Screw Press and Rotary Dryer for Rubber Waste....*231
Shears, Portable Motor Driven Alligator...*659
Silent Chain Drive....*22
Slitting and Rewinding Rubber, Machine for....*348
Sole Laying Machine, Perrault's....*600
Solid Tire Drilling Machine.... 350
Southwark Solid Tire Press.... *65
Tire Bead Press....*120
Spreader, Hopewell's Enclosed....*540
Spreaders, Anti-Wrinkling Device....*178
Standard Cloth Measurer....*413
Stitcher, Hand....*22
Tester, Hand Operated Cloth or Rubber....*349
Testing, Autographic Friction....*403
Testing the Crimp of Warp and Filler Threads, Machine for....*165
Thropp Reduction Gear Drive....*475
Thropp's (Peter D.) Press Vulcanizer.... *66
Thropp's Tire Building Machine....*477
Tire Bead Centering Device.... 350
Building and Wrapping Machine, Universal....*178
Building Machine.... 541
Casings, Methods and Appliances for....*477
Casings, Re-Treading, Sewing Machines for....*291
Cord.... 541
Fabric Loom, Automatic....*538
Flap Making Machine....*293
Mold, New Open Cure....*540
Molds, Non-Skid, Machine for Engraving 539
Press, Southwark 250-Ton Goose Neck...*413
Trimming Machine....*477
Toy Balloon Inflating Machine....*600
Trabue's Label Gumming Machine....*291
Trade-Marking Fabrics and Proofed Rubber Goods, Machine for....*348
Trautvetter Bias Fabric and Loom....*603
Tubing Machine Head, Royle's....*540
Utility Air Hoist....*661
Valve, Hydraulic, for Rubber Mills....*292
Vanadium Steel Shears for Cutting Rubber 476
Vulcanizer, Fremier Electric....*538
Press, Gammeter's Vertical....*661
Vulcanizing Brush Bristles Set in Rubber..*600
Press, 15-Ton Duplex....*538
Tubing or Hose in 500 Foot Lengths...*661
Water Bottles, Hot, Collapsible Core for..*600
Wills' Automatic Jar Ring Cutting Lathe...*120
Winkley Sole Cutting Machine....*414
Wire, Rubber Covered, Machine for Panning....*292
Mackenzie, Colin, Death of....(*Portrait*) 421
Madura, Plantation Rubber Export Statistics 153, 454
Malacca Planters' Association, Annual Meeting of.... 506
Malaya and Ceylon, Rainfall Percentages in.. 201
Malaya, Plantation Rubber Export Statistics.. 153
Production Costs Statistics.... 202
Rubber Export Statistics 321, 376, 454, 513, 579, 638, 695
Rubber Trade in.... 688
Manaos and Para Rubber Export Statistics... 153
Manders, A. Staines, Appointed Press Manager....(*Portrait*) 88
Mandrel for Making Inner Tubes.... 350
Manufacture, Tire, Continuous Process....*230
Manufacturing Processes, New....233, 350, 415
Process Patents.... 541
Market Cables....576, 636, 694
For Chemicals and Compounding Ingredients....51, 100, 158, 206, 270, 328, 394, 459, 522, 584, 644, 645, 704, 705
For Cotton and other Fabrics....50, 100, 159, 207, 271, 329, 395, 458, 522, 584, 644, 703
For Crude Rubber....46, 96, 151, 208, 263, 320, 386, 450, 512, 575, 635, 694
For Rubber Scrap....50, 99, 155, 215, 260, 319, 393, 458, 521, 583, 643, 644, 702, 703
Markham, Sir Clements Robert, Death of (*Portrait*) 299
Marks Reclaiming Patent Sustained.... 170
Massage Outfit, Vacuum Clean-O-Pore....*482
Masticator, Price's Vacuum....*539
Mat, Rubber, for Revolving Door....*173
Matthiesen, Frantz, Death of.... 358
Matting, Rubber, Perforated in Rolls....*236
McGibbon, D. Lorne.... 304
McKechnie, James H., Death of....(*Portrait*) 299
Meade's Multiple Spreading and Doubling Apparatus.... *67
Mechanical Rubber Goods Manufacturers' Meeting.... 137
Medical Who's Who, 1916, The (*Book Review*) 483
Melius, George E., Death of....(*Portrait*) 128
Micrometer Reading Device, Improved....*116
Microscope, Special Binocular....*537
Midgley Collapsible Core....*430
Midgley Tire & Rubber Co. Changes Name and Enlarges Capital.... 362
Mill, M. & W.'s Heavy Duty Refining....*599
Miller's Boot and Shoe Repair Vulcanizer....*177
Mills, Rubber, Fire Hazards in....*219
Mixer and Grinder, Modern....*659
Apron Feed for....*475
"Jumbo" Steam Jacketed....*231
Mixing Mill, Automatic....*293
Moisture Content of Automobile Tire Fabric and Its Influence upon the Weight and Tensile Strength.... 549
Mold, Adamson's Tread.... *21
Press, Hydraulic Tire Vulcanizing....*122
Electric Tire....*232
Patent, Thropp Tire—Not Sustained.... 165
Presses, Two New Adamson....*120
Rubber Expansion, in Metal Shaping....*566
Tire, New Open Cure....*540
Molding Pneumatic Tires....*477
Molds for Seamless Rubber Goods, Some....*226
Tire, Non-Skid, Machine for....*539
Motor Car, Electric Storage Battery in the...*589
Motor-Driven Conveyances, New Cable for... *71
Operated Screwdown for Calenders.... *65
Trucks, Demountable....*606
Motors, Alternating Current, Protection of... *66
Mucilage Applier, Convenient....*172
Multiple Expansion Joints....*291
Mushorn, Dietrich, Death of.... 129

N

National Association of Waste Material Dealers, Annual Meeting (*Portrait of L. Birkenstein*) 361
India Rubber Co., Welfare Work at....*434
Netherlands, Crude Rubber Statistics, 1914... 294
East India, Rubber in....(*Book Review*) 123
India (*See Dutch East Indies*).
Neutrality, An Overseas Trust to Insure (*Editorial*) 54
NEW GOODS AND SPECIALTIES—
Aeroplanes, Model, Driven by Rubber Strands....*237
Aetna Electrician's Glove....*545
"Amphibian" Sandals....*670
Aqua-Phone, The.... 236
Arch Support, Anterior-Metatarsal....*609
Armor-Tred Sole 72
Army Sandal, New....*481
Auto Brush, "Kleenway"....*355
Clock, Lewis "Nojar" Rubber Retained...*172
Lamp Dimmer, Monarch Adjustable....*174
Tent, Handy....*546
Wind-Shield Cleaner "Clear-O-Scope"....*481
Automatic Electric Switch for Automobiles.*608
Automobile Camp Bed and Tent....*419
Steering Wheel....*173
Aviaphone, Turner's....*354
Ball, "Ebonite" Bowling.... 126
Balloon Novelties....*547
Balloons, Toy.... *15
Bat, New, Protecting Cricketer's Hand from Sting of Blow.... *71
Bath Fixture, Watrous....*174
Bathing Accessories, Rubberized....*607
Cap Novelties....*418
Costume Novelties....*355
Costumes, Fashions in....*545
Suit Case....*355
Batting Glove, Protecting Cricketer's Knuckles.... *71
Bed, "Universal" Tubular....*238
Bird and Game Calls, Rubber....*72
Boots for Horses, Soaking and Poulticing..*172
Rubber, with Muffler Top....*173
Bowling Mat and Foot-Grip....*669
Breathing Apparatus, Vacuum....*482
"Buddy" Inside Lace Facs....*297
Cable for Motor-Driven Conveyances.... *71
Chin Mask and Frown Band....*668
Church Telephones for Deaf Worshippers.. *70
Cleaner, Electric with Soft Rubber Brush..*174
Coaster, Sidewalk, "Bi-Plane"....*298
Coat, Camden Waterproof....*172
"Gnidroc" for War Purposes....*238
Thresher Trench....*238
Cord Tires for Aeroplanes.... *17
Dater, "Radio"....*547
"De Luxe" Rubber Goods....*15
Dean Non-Losable Stopper....*353
Dental and Surgical Inhalers in New Forms *70
Appliance, Improved....*480
Dish Washing Device, New....*236
Drop Bottle with Rubber Cap and Bulb....*296
Durst Anti-Splasher....*418
Elastic Fabric Weight Reducer.... *16
Electric Ear-Phone, Lorgnette....*420
Envelope Sealer, Standard....*547
Exercising Apparatus, Indoor....*173
"F. & S. Colonel" Golf Ball....*670
Finger Cot, "Unika" Rubber....*668
Protector, Rubber Sewing....*298
"First Aid" Iodine Ampul.... *16
Fly Swatter, "Sanitary" Flexible Rubber...*236
Football Pants with Elastic Band.... *72
Footwear, Canadian Consolidated....*125
"Ford Air Break"....*298
Rear Wind-Shield....*609
Fruit Jar Ring, Scalloped....*480
"Frunt-Seet" Auto Robe....*420
Gasolene Hose, "Thermoid"....*419
Gear Guide Mat, New....*354
Gloves, Workmen's Protective....*547
Goggles, Rubber, for Protection against Gases and Acids....*126
Golf Ball Design.... *71
Grip, "Satin"....*546
Tees, Something New in....*482
Goodrich Gasolene Hose.... *15
Safety Respirator....*296
Grease Gun, New.... 16
Gun Bracket with Rubber Holders.... 126
Hair Tonic Comb....*72
Trimmer, Every Man His Own.... *17
Handles, Hard Rubber....*126
Handy Rubber Stamp....*353
Hat Cover, "Utility"....*546
Head Bands, Elastic....*481
Heel Liner, All Rubber....*125
"On the Level" Rubber....*297
Pneumatic Rubber....*419
Heels, Rubber, Jones' "Never-Loosen"....*669
Heels and Soles, Phillips' "Military"....*237
Horseshoe, "Fruin-Tobin" Rubber Bar....*481
Hose, Metal and Rubber for Gasolene....*482
Protector, Rubber....*608
Ringmeter Garden....*668
Triplexed Steam....*173

*Illustrated.

NEW GOODS AND SPECIALTIES—(*Continued*).
Hydraulic Force Cup, McDermott....*607
Hydrometer, Rubber....*669
Hygeia Inventions, "Hygeia Cozy" Nursing Bottle and Nipple....*71
Ice-Packer with Rubber Bulb....*420
Interchangeable Rubber Heel....*72, *609
Japanese "Darky" Novelty....*237
Massage Outfit, Vacuum Clean-O-Pore....*482
Mat, Rubber, for Revolving Door....*173
Matting, Rubber, Perforated in Rolls....*236
Mourning Footwear....*418
Mucilage Applier, Convenient....*172
"Natural Nurser" Nipple....*545
Nut Cracking Device with Rubber Rings...*238
Outing Shoes, Six New....*17
Patient's Bib and Laboratory Apron, Rubber-Coated....*298
Penholders, Pneumatic....*174
"Perfected" Dater, New Features in....*125
Phonograph Diaphragm with Rubber Ring..*238
Pivot Sleeve Golf Coat....*480
Pneumatic Cue for Pool....*420
Reversible Landing Mat....*353
Pump, Silk Outing....*298
Puncture Finder, "Du-Tell"....*296
Radiator Hose, "Testoid"....*354
Support, Flexible....*354
Raglan Raincoat....*16
Raincoat, "Featherwaite"....546
Features, New....*16
Harris's Dainty....*297
Models, New "Kenreign"....*236
"Silvareign"....*669
Razor Strop, New Naugahyde....*668
"Realflex" Armored Conductor....*481
Red-Legged Boot for Santa Claus Trade....*71
Riding Habits, Latest....*16
Rubber and Metal Packing....*126
Rubber Boot for Severe Service....*15
Cemented Paint Brush....*608
Comb with Staggered Teeth....*70
Doll that Talks....*237
Filter Rings, New....*64
In the Nursery....*609
Lift for Louis Heels....*608
Sheeting, "Imperial"....*669
Shock Absorbers for Ears....*72
S. S. White Buff Rubber Dam....355
Scintella, Single Texture Raincoat Fabric....669
Screw Driver, Pocket, with Rubber Handle.*237
Rubber Covered....*72
Seat, Waterproof Folding....*125
Shaving and Massage Brush, Combination..*126
Brush for Traveller, Novel....*237
Brush, "Heldtite"....*174
Sheeting, "Noway" Rubber....480
Shoe, Tripod, "Sanderson" Rubber, for Camera....*238
With Elastic Side Gore....*174
"Silvareign" Waterproof Fabric and Garments....*669
Siphon, All-Rubber....*173
Slip-On, Double Texture....*419
Sof-Lite Headlight Dimmer....*353
Sole, "Monkey Grip" Rubber....*126
"Textan"....545
Spark-Plug Tester, "Royal"....*354
Sport Garments for Wet Weather....*418
Sporting Boots, Light Weight....*353
Sportsmen's Engraved Garter....482
Spray Device with Rubber Ball for Bathing..*607
Stair Tread with Rubber Studs....*354
Syringe, Suction Tube, Improvement on....237
Tan Military Rubber Boot....*420
Tatting Shuttle and Thimble, Rubber....*298
Tennis Ball, "Goodrich Championship"....*297
"Maderite"....*125
"New Paramount"....*668
Racquet Glove....*608
Thermo Steaming Bag....*296
Tire Inflator Valve, Rubber Covered....*353
Spring, Jones Pneumatic....*296
Tobacco Pouch, "All-Together"....*670
Rubber-Lined....*608
Toys, Rubber, for the Holidays....*127
Traction Belt, Non-Skid....*420
Traveling Case, "Utility Adapto"....*547
Treo Elastic Girdle....*609
Truss, Infant's All-Rubber....126
Tube Connector, "Universal" Reinforced...*546
Tubing, Rubber, Highest Priced in the World....*125
Typewriter Cushion Feet with Double Cavity....*481
Umbrella Hanger, "Audubon"....*172
"Tidy," New Device....*238
"Unika Futfit" Bathing Shoe....*480
"Uniq" Running Board for Ford Cars....*608
Vacuum Clip Hanger, New....*607
Cup, New Uses for....*546
Hanger, "Cantilever Flyfoot"....*546
"Vacu-Vas" for Flowers....*297
Veeder Clutch Speed Counter....*296
Violin Chin Rest, Williams' Patent....*480
Vulcalose Sanitary Rubber Toilet Seat....*668
Watch Holder for Steering Wheel....*297
Protector, Rubber....*607
Water Bottle, Rubin Duplex....*297
Waterproof Protecting Towel and Bathing Cap....*419
Clothing....*70
Weatherstrip, McCormick....174
Work Shoe with Rubber Heel and Rocker Bar....*298
New York Crude Rubber Arrivals....152, 210, 388, 451, 452, 515, 576, 636, 696, 697
Preparedness Parade (*Portrait of Capt. A. Spadone*) 426, *487
Rubber Import and Export Statistics....154, 212, 266, 323, 389, 453, 518, 579, 640, 698
Nicaragua, Rubber Industry in....95
Rubber Statistics....95
Nilson Tilting Wire Reel....66
Nipple Bead Forming Machine....*67
"Natural Nurser"....*545
Nipples, Dipping Machine for Making....*178
Nitre Cake in Rubber Reclaiming....628
Nut Cracking Device with Rubber Rings....*238
Nuttall Flexible Coupling....*66

O

OBITUARIES—
Alden, Frederick J....240
Andrews, Benjamin L....357
Arnold, Charles H....(*Portrait*) 299
Arnold, Mrs. Charles H....24
Austin, George E....612
Bailey, Milton T....(*Portrait*) 23
Barker, Melvin Hazen....356
Bassett, Charles Warren....422
Baxter, James E....(*Portrait*) 357
Bell, P. Carter....(*Portrait*) 678
Breakspear, F. C....612
Bryant, Richard S....300
Burke, James W....422
Campbell, V. D., Lieutenant-Colonel David C....422
Challiner, C....612
Colt, Le Baron C....(*Portrait*) 485
Conner, William Andrew....(*Portrait*) 181
Cooke, George Kissam....422
Davenport, George F....81
Deane, Edwin Wesley....421
Dodge, James M....(*Portrait*) 180
Duryee, A. R....552
Eberhart, Everett G....24
Endlich, Rudolph....358
Flynn, Michael M....(*Portrait*) 239
Gottschalk, Louis....129
Gray, Matthew Hamilton....24
Hall, Edwin R....(*Portrait*) 356
Halland, James T....(*Portrait*) 551
Hawkins, Edmund R....(*Portrait*) 180
Hazen, George David....421
Henderson, William McLean....422
Hill, Warren M....81
Hopewell, John....(*Portrait*) 357
Hotchkiss, Justus S....129
Huebon, Otto P....551
Johnstone, William....(*Portrait*) 422
Jones, Henry S....552
King, Philip James....129
King, Thomas....357
Linburg, Watson H....(*Portrait*) 239
Lindsay, J. K....240
Loyd, John....81
Lyall, William....(*Portrait*) 239
Mackenzie, Colin....(*Portrait*) 421
Markham, Sir Clements Robert....(*Portrait*) 299
Matthiesen, Frantz....358
McKechnie, James H....(*Portrait*) 299
Melius, George E....(*Portrait*) 128
Mushorn, Dietrich....129
Oppenheimer, Abraham....421
Park, William Oswald....421
Parker, Robert P....357
Pearce, John H....(*Portrait*) 551
Phelps, James T....551
Pope, William R....24
Porter, G. Leonard....240
Pound, Edward H....(*Portrait*) 485
Pratt, Philip W....128
Rapp, William....486
Reithoffer, Moriz Josef....300
Rice, Isaac L....128
Rockwell, J. C....422
Runge, L. A....300
Russell, George C....421
Schrader, George H. F....240
Sieberling, J. H....(*Portrait*) 612
Spalding, A. J....(*Portrait*) 23
Speakman, Henry....240
Squires, Eugene Clifton....(*Portrait*) 552
Supf, Karl....(*Portrait*) 358
Trewin, J. R....612
Ule, Ernst....240
Videto, Theodore H....(*Portrait*) 356
Vincent, Frank....551
Weber, Aaron D....486
Weitling, William W....422
Williams, Charles H....180
Yoshida, Y....612
Oil Aniline, Manufacture of....*167
Oil, Paint and Drug Reporter Green Book for Buyers....(*Book Review*) 123
Oppenheimer, Abraham, Death of....421
Opportunities and Inquiries, Trade....30, 81, 133, 182, 235, 352, 409, 466, 529, 611, 666
Optimism of Amazon....(*Editorial*) 2
Overseas Trust to Insure Neutrality, An (*Editorial*) 54

P

Pacific Coast, Rubber Trade on..86, *252, 436, 500
Packing, Rubber and Metal....*126
Standard, Rubber Scrap Dealers'....619
Panther Rubber Manufacturing Co., Sketch of....*184
Pants, Football, with Elastic Band....*72
Para and Manaos Rubber Export Statistics...153
Exporters and Importers, 1915, List of (*Book Review*) 416
Rubber, Vulcanization Experiments on....114
Parade, Boston Preparedness (*Portrait of Major H. P. Ballard*) 488
New York Preparedness (*Portrait of Capt. A. Spadone*) 426, *487
Park, William Oswald, Death of....421
Parker Demountable Rim and Wheel....*605
Parker, Robert P., Death of....357
Patent, Marks Reclaiming Sustained....170
Patented Treatment of Rubber....12, 63
Patents, Machinery....67, 122, 179, 233, 293, 350, 415, 479, 602, 663
Other Chemical....169, 225, 290, 658
Recent, Relating to Rubber....42, 94, 149, 204, 258, 318, 383, 443, 509, 510, 572, 573, 632, 634, 691, 692
Valid, Seiberling, Stevens and State....496
Pearce, John H., Death of....(*Portrait*) 551
Pearson, H. C., Gutta Percha, Botany and Source—III....*3
Gutta Percha, Sources—IV....*55
Herbert P....(*Portrait and Sketch*) 244
Rubber Machinery....(*Book Review*) 68
Penholders, Pneumatic....*174
Pennsylvania Rubber Co., Home of....*130
Perlman Wins the Demountable Rim Suit (*Portrait of L. H. Perlman*) 402
Pessimistic Prophecy, A....(*Editorial*) 461
Phelps, James T., Death of....551
Phonograph Diaphragm with Rubber Ring....*238
Physiological Principles for Determining the Value of Various Rubber Tapping Methods (*Book Review*) 234
Pipette, Modified....*225
Planer, Block, Freeman Improved....*660
Plantation Rubber Exports from Far East....153
Financing Imports of....*336
From Far East....99
Preparing for the Market...(*Book Review*) 543
Use of Sodium Bisulphite in Preparation of Smoke House Practice....63
Planting Notes, Rubber....40, 91, 148, 202, 256, 315, 382, 441, 504, 571, 629, 630, 687
Rubber in Cochin China....*649, 650
Pneumatic Tire Casings....233
Poisons in Rubber Manufacture, Industrial...*107
Pope, William R., Death of....24
Porter, G. Leonard, Death of....240
Portuguese West Africa, Hevea Export Statistics....256
Rubber Cultivation....256
Pound, Edward H., Death of....(*Portrait*) 485
Power Costs, Analysis of....358
Practical Exporting....(*Book Review*) 234
Practical Patriotism....(*Editorial*) 398
Practical Safety Methods and Devices (*Book Review*) 664
Pratt, Philip W., Death of....128
Preparedness and Rubber....(*Editorial*) 331
The Rubber Trade....(*Editorial*) 273
Committee, Rubber Trade....653, 655
Looking Backward....(*Editorial*) 587
Parade, Boston (*Portrait of Major H. P. Ballard*) 488
Parade, New York (*Portrait of Capt. A. Spadone*)..426, *487
Press, Duplex Vulcanizing, 15-Ton....*538
Screw and Rotary Dryer for Rubber Waste....*231
Southwark Solid Tire....*65
Vulcanizer, Peter D. Thropp's....*66
Vulcanizer, Ramless....*601
Vulcanizing, Gas Heated....*541
Presses (*See Machinery*).
Pressure Cure of Rubber Footwear....*333
Price Lists, Rubber Footwear....228
Price's Vacuum Chamber Tubing Machine....*121
Prices, Higher, and When....(*Editorial*) 161
Normal vs. War, on Chemicals and Compounding Ingredients....110
Processes, New Manufacturing....63, 116, 179, 233, 350, 351, 415, 541, 603, 663
Rubber Footwear Manufacture....*347
Production of Rubber, World's, in 1915....376
Profits and Commissions, Rubber, Insuring...171
Pulley, Magnetic Separator....*177

Q

Quarantine, Rubber's Service in....*7
Quotations, Rubber Company Shares....30, 80, 131, 182, 241, 302, 362, 423, 489, 533, 613, 672

R

Radiator Hose, "Testoid"....*354
Support, Flexible....*354
"Railway Expansion in Latin America" (*Book Review*) 610
Raincoat Fabric, Single Texture, Scintella....669
"Featherwaite"....546

**Illustrated.*

Harris's Dainty *297
Models, New "Kenreign" *236
Raglan *16
New Effects *16
"Silvareign" *669
Ramless Press Vulcanizer *601
Rapp, William, Death of 486
Razor Strop, New Naugahyde *668
Reclaiming, Marks Patent Sustained 170
Rubber, Nitre Cake in 628
Red-Legged Boot for Santa Claus Trade *71
Reducer, Elastic Fabric Weight *16
Reed Power Pattern Grader and Cutter *121
Reel, Nilson Tilting Wire 66
Refrigeration, Cooling Calender and Mill Rolls *534
Regulator, The C. C. Pressure *121
Reithoffer, Moriz Josef, Death of 300
Reliner Mold and Vulcanizer, Dykes' *599
Reminiscences, Early Experiences of Veteran Rubber Superintendent 19
Report of International Rubber Congress and Exhibition, Batavia ..... (*Book Review*) 68
Respirator, Goodrich Safety *296
Rhode Island Rubber Trade 32, 83, 141, 193, 249, 311, 372, *434, 499, 564, 622, 682
Rice, Isaac L., Death of 128
Riding Habits, Latest *16
Rim, Demountable, History 472
Rims, Welding by Electricity *473
Robinson, W. H. ..... (*Portrait and Sketch*) 555
Rockwell, J. C., Death of 422
Rolls for Removing Wrinkles from Fabrics *476
Royle, Vernon ..... (*Portrait and Sketch*) 615
Royle's Multiple Tubing Machine Head *67
Rubber and Compounding Reserves (*Editorial*) 105
And Metal Packing *126
Artificial, from Vodka 224
As Related to the War *110
Cements in Leather Goods Manufacture 595
Ceylon, New Export Tax on ..... (*Editorial*) 53
Club of America, Inc 137
Announcements 194
Annual Dinner 29
Annual Meeting 282
Banquet 221
Day ..... (*Editorial*) 217
Executive Meeting 29
List of New Members 281
New President, The ..... (*Editorial*) 274
Outing 489, 553, *592
17th Year Book and Annual Report ..... (*Book Review*) 664
Sixteenth Annual Banquet ..... (*Portraits*) *276
Company Dividends 25, 75, 131, 182, 242, 362, 423, 489, 553, 613, 672
Company Share Quotations 30, 80, 131, 182, 241, 302, 362, 423, 489, 553, 613, 672
Companies' Position ..... (*Book Review*) 123
Conditions in Ceylon *379
Covered Screw Driver *72
Crude and Manufactured, Yearly Import and Export Statistics 323, 385, 455
Determining Proteins in 344
Doll that Talks *237
Expansion Mold in Metal Shaping *566
Factories, Fire Hazards in ..... (*Editorial*) 219
Filter Rings *64
Footwear Manufacture, Processes of *347
Footwear, Pressure Cure of *333
Footwear Price Lists 228
From German Weeds 571
Goods Manufacturing Company's Annual Report 424
Goods Manufacturers', Mechanical, Meeting of 137
Goods, Seamless, Some Molds for *226
Goods? Will There Be a "Dumping" of (*Editorial*) 54
Growers' Association, 1915, Transactions of (*Book Review*) 295
Guarantee, New Form of 466
Guessing Contest, Crude ..... (*Editorial*) 105
How It Should Be Sold 634
Importers, Growing Ranks of ..... (*Editorial*) 54
In Netherlands East India ..... (*Book Review*) 123
In the Construction of Aeroplanes *463
In the Nursery *609
In the Service of Life-Saving *55
Industry, Census of 1914 335
Industry, Modern Industrial Methods 117
Industry of the Amazon, The ..... (*Book Review*) 175
Insulation, Testing 536
Latex, New Coagulants for 468
Machinery ..... (*Book Review*) 68
Manufacture and Health ..... (*Editorial*) 106
Manufacture, Industrial Poisons in *107
Manufacture, New Processes in 63
Manufacturing Processes, New 63, 116, 179
Mills, Fire Hazards in *219
Of Uniform Color 168
Packing Advice ..... (*Editorial*) 398
Patented Treatment of 12, 64
Planting in Federated Malay States *381
Planting Notes 40, 91, 148, 202, 256, 315, 382, 441, 504, 571, 629, 630, 687
Preparedness and ..... (*Editorial*) 331
Prices When Peace Is Restored ..... (*Editorial*) 588
Producing Companies, 1916 ..... (*Book Review*) 610
Profits and Commissions, Insuring 171
Pure, Preparation and Properties of 168
Resins 114
Routes from the Far East *124
Samples for Analysis 224
Scrap Dealers' Packing Standard 619
Scrap Market 50, 99, 155, 215, 260, 319, 393, 458, 521, 583, 643, 644, 702, 703
Shipments, Contraband 171
Shock Absorbers for Cars *72
Slitting and Rewinding Machine *348
Soles and Heels in the British Shoe Industry 409
Standards, Proposed S. A. E 229
Stratagems of the Blockade ..... (*Editorial*) 647
Structure of 345
Substitute 12, 115
Sundries Division, Executive Meeting 137
Supply, Tires and the ..... (*Editorial*) 217
Tackiness of 168
Tapping in South Kurg, India 317
Tapping Methods, Various, Physiological Principles for Determining the Value of (*Book Review*) 234
Three Hundred Millions in ..... (*Editorial*) 331
Trade Association of New York Adopts New Rules 18
Trade Association of New York, Annual Meeting 137
Trade in Malaya 688
Trade, Preparedness and the ..... (*Editorial*) 273
Trade Preparedness Committee 653, 655
Tree, Old, Composition of an 505
Washing, Wholesale Rubber *39
Wide Planting of 505
Rubber's Service in Quarantine *7
Runge, L. A., Death of 300
Running Board for Ford Cars, "Uniq" *608
Russell, George C., Death of 421
Russia and Anglo-Russian Review, Twentieth Century ..... (*Book Review*) 123
Russia, Consumption of Rubber in 376
Rubber Trade in 313
Rutherford, R. O. ..... (*Portrait and Sketch*) 426

S

Safety Stop and Magnetic Clutch-Brake for Mills *231
Sandals, "Amphibian" *670
Scandinavia, Rubber Trade 254
Scandinavian Rubber Notes 200
Schlosser, George ..... (*Portrait and Sketch*) 554
Schrader, George H. F., Death of 240
Scott Fabric Tester *65
Scrap, What a Mountain of, the War Is Making! ..... (*Editorial*) 2
Cutter, "Giant" Rubber *539
Dealers' Packing Standard 619
Rubber Market 50, 99, 155, 215, 260, 319, 393, 458, 521, 583, 643, 644, 702, 703
Screw Driver, Pocket, with Rubber Handle *237
Rubber Covered *72
Screwdown for Calenders, Motor-Operated *65
Season's Greetings, The ..... (*Editorial*) 161
Seat, Toilet, Vulcalose Sanitary Rubber *668
Waterproof Folding *125
Seattle, Arrivals of Crude Rubber 516, 517, 577, 638, 697
Seiberling, Stevens and State Patents Valid 496
Septennis Syntheticus, The ..... (*Editorial*) 398
Shaving and Massage Brush, Combination *126
Brush for Traveler, Novel *237
Brush, "Heldtite" *174
Shears, Portable Motor-Driven Alligator *659
Vanadium Steel for Cutting Rubber 476
Sheeting, New "Imperial" Rubber *669
"Noway" Rubber 480
Shipments, Contraband Rubber 171
Shock Absorbers for Cars, Rubber *72
Shoe, Tripod, "Sanderson" Rubber, for Camera *238
Shoes (*See Footwear*).
Show, Automobile for 1916 194
New York's Sixteenth Annual Automobile *222
Sieberling, J. H., Death of ..... (*Portrait*) 612
Sierra Leone, Peculiar Method of Gathering Rubber in 688
Singapore Rubber and Gutta Export Statistics 454, 514, 695
Rubber Auctions 47, 99, 153, 209, 264, 321, 387, 451, 513, 576, 636, 695
Siphon, All-Rubber *173
Skiving Machine, Inner Tube, with Motor Drive *475
Slip-On, Double Texture *419
Smoke House Practice, Plantation 228
Sodium Bisulphite, Use of, in Preparation of Plantation Rubber 63
Sole Cutting Machine, Winkley *414
Laying Machine, Perrault's *600
Soles (*See Heels and Soles*).
Solvent Naphtha Problem, The ..... (*Editorial*) 397
South America; Peeps at Many Lands (*Book Review*) 416
South American Countries, Tariff Systems of (*Book Review*) 664
South India (*See India*).
Hevea Production 256
Rubber Planting Notes 256
Southwark Solid Tire Press *65
Tire Bead Press *120
Spain as a Market for American Rubber Tires 52
Spalding, A. G., Death of ..... (*Portrait*) 23
Spark-Plug Tester, "Royal" *354
Speakman, Henry, Death of 240
Specific Gravity Balance *597
Balance, Liquid *412
Sport Garments for Wet Weather *418
Spray Device with Rubber Ball for Bathing *607
Spreader Fires, Causes of 286
Hopewell's Enclosed *540
Room Fires, Preventing *693
Spreaders, Anti-Wrinkling Device for *178
Spreading Machine, Devine's *232
Squires, Eugene Clifton, Death of ..... (*Portrait*) 552
Stair Tread with Rubber Studs *354
Stamp, Handy Rubber *353
Rubber, Universality of ..... (*Editorial*) 461
Standard Pneumatic Tubes and Tires *430
Standards, Rubber, Proposed S. A. E 229
Tire Rim, British, American Sizes 474
STATISTICS—
Acreage, World's 382
American Export, 1915 273
Asbestos 462
Brazil, Exports and Imports, Rubber 153
Exports for 18 Years 263
Rubber Exports from Para and Manaos, 1915 391
Rubber Exports from Manaos 325, 455, 517, 579, 639, 699
Rubber Tires Imported 44
British Gold Coast, Exports 148
Guiana, Balata Exports 316
Guiana, Tapping Results in 508
Honduras Chicle Export Statistics 630
Malaya, Acreage Under Rubber 381
Rubber Exports for 10 Years 381
South Africa, Imports of Rubber Goods 88
Burma, Rubber Exports 91
Canada, Cotton Fabric Imports 100, 271, 329
Crude Rubber 262
Rubber Imports and Exports 103, 156, 213, 268, 326, 393, 456, 519, 581, 641, 700, 701
Census Rubber, for 1914 331
Ceylon and Malaya, Crop Percentages in 201
Rainfall Percentages in 201
Ceylon Exports and Imports, Rubber 53
Rubber Exports 264, 321, 387, 454, 513, 579, 638, 695
Plantation Acreage 91
Chili—Imports of Rubberized Fabrics 44
Constantinople, Exports of Waste Rubber 571
Consumption of Rubber in Great Britain, France and Russia 376
Far East, Comparative Distances 124
Plantation Rubber Export from 153
Federated Malay States, Rubber Exports 210, 263, 321, 387, 454, 513, 579, 638, 695
France, Imports of Balata and Rubber 325, 460, 521
French Cochin China, Rubber Tree 504
German West Africa, Hevea Exports 256
Germany, Waste Imports and Exports 316
Gold Coast, British, Exports 148
Golf Ball ..... (*Editorial*) 275
Guiana, Dutch, Balata Exports 213
French, Balata Exports from 213
Holland, Rubber Imports and Exports 90
Exports to United States 625
Importers, Rubber, Number in United States 54
Italy, Rubber 269, 520, 521, 583, 643, 702
Japan, Manufactured Rubber Exports 378
Rubber Exports, 1914, and Prices 147
Tire Exports 626
Java and Madura, Rubber and Gutta Exports 513, 579
Java and Sumatra, Exports 257
Java, Rubber and Gutta Exports 454
Madura, Rubber and Gutta Exports 454
Malaya Production Costs 202
Rubber Export Statistics 321, 376, 454, 513, 579, 638, 695
Netherlands, Crude Rubber, 1914 294
East India, Acreage 257
New York, Arrivals of Crude Rubber 388, 451, 452, 515, 576, 636, 696, 697
Imports and Exports of Crude and Manufactured Rubber 102, 154, 212, 266, 323, 389, 453, 518, 579, 640, 698
Nicaragua, Rubber Industry 95
Plantation Rubber from the Far East 47, 99, 153, 209, 264, 321, 387, 454, 513, 579, 638, 695
Portuguese West Africa, Hevea Exports 256
Rubber, Crude and Manufactured, Yearly Import and Export Statistics, by Countries 214, 267, 323, 385, 455
Seattle Crude Rubber Arrivals 516, 517, 577, 638, 697
Singapore, Rubber and Gutta Imports and Exports 454, 514, 639, 695
South India, Hevea Production 256
Rubber Exports 91
Straits Settlements, Rubber Exports 210, 321, 387, 513, 579, 638, 695
Sumatra, Rubber Exports from 202
Sumatra, Export Statistics 257
Tire Fabrics, Requirements, Production, 1916 165
Trinidad and Tobago, Exports 148
Uganda, Rubber Exports, 1914 and 1915 148
United Kingdom, Imports and Exports of Crude and Manufactured Rubber 44, 103, 214, 321, 327, 392, 520, 582, 583, 642, 701

*Illustrated.

STATISTICS—(*Continued*).
United States, Crude Rubber Statistics for 1915 262
Custom House Statistics....98, 154, 212, 323, 389, 452, 517, 578, 638, 697
Imports and Exports of Crude and Manufactured Rubber.....44, 98, 155, 213, 268, 326, 392, 456, 519, 581, 641, 699, 700
Imports of Rubber Goods into, for 1913 and 1914 54
Monthly Importations of Rubber for Six Years 391
Plantation Rubber 513
Rubber Afloat 386, 451
Value of Annual Production of Rubber Goods 54
Venezuela, Balata and Rubber Exports.... 203
World Rubber Production..... 571
World's Production of Rubber in 1915..... 376
Stedman, Arthur W....(*Portrait and Sketch*) 490
Steering Wheel, Automobile..... *173
Stock Exchanges (London and Provincial) Ten-Year Record.....(*Book Review*) 123
Stopper, Dean Non-Losable..... *353
Straits Settlements, Rubber Exports.....153, 210, 321, 387, 513, 579, 638, 695
Strike Epidemic, A.....(*Editorial*) 526
Stud, Non-Skid, Applying Machine..... *122
Suit Case, Bathing..... *355
Sulphide of Antimony, Golden, Select Methods of Analysis of 598
Sulphur, Colloidal 64
In Rubber, Determination of.....168, 224
Sumatra, Rubber Export Statistics.....202, 257
Supf, Karl, Death of.....(*Portrait*) 358
Surgical and Dental Inhalers in New Forms.. *70
"Sussex" Disaster, Rubber Men in..(*Portrait*) 365
Sweden Prohibits Rubber Exports..... 198
Switzerland, Rubber Situation in..... 197
Synthetic Rubber..... 115
Commercial .....(*Editorial*) 162

T

Tackiness of Rubber..... 168
Tapping Methods, Rubber Physiological Principles for Determining Value of Various (*Book Review*) 234, 483
Tariff Commission, The Proposed.(*Editorial*) 275
On Brazilian Rubber, Proposal to Reduce.. 690
Systems of South American Countries (*Book Review*) 664
Tatting Shuttle and Thimble, Rubber..... *298
Tax, New Export, on Ceylon Rubber (*Editorial*) 53
"Technologie Der Kautschukwaren" (*Book Review*) 295
Des Kautschuks, Die.....(*Book Review*) 123
Telephones, Church, for Deaf Worshippers .. *70
Tennis Ball, "Maderite"..... *125
"New Paramount"..... *668
Test, Autographic Friction, of Hose and Belting *591
Tester, Hand Operated Cloth or Rubber..... *349
"Royal" Spark-Plug..... *354
Scott Fabric..... *65
Testing Cotton Fabrics and Rubber Products, Methods of..... *566
Machine, Autographic Friction..... *403
Machine, for the Crimp of Warp and Filler Threads *165
Rubber Insulation..... 536
Textiles, Dictionary of.....(*Book Review*) 295
Thropp's, Peter D., Press Vulcanizer..... *66
Tibbitts, E. C.,.....(*Portrait and Sketch*) 427
Tire Accessory, New..... *550
And Rim, Luck Pneumatic..... *496
Bead Centering Device..... 350
Bead Press, Southwark..... *120
Bead Press, Southwark 250—Ton Goose Neck *413
Bead Trimming Machine..... *477
Blow-Out Patch..... 260
Bowers Hand-Built..... *369
Building and Wrapping Machine, Universal. *178
Building Machine..... *541
Building Machine, Thropp's..... *477
Casings, French Press Vulcanizer for..... *602
Casings, Methods and Appliances for..... *477
Casings, Pneumatic..... 233
Casings, Sewing Machine for Re-Treading. *291
"Clincher Cross"..... *307
Cord 541
Core, Midgley Collapsible..... *430
Core Revolving Machine, Gammeter's Pneumatic *349
Dimension Anomalies, European..... 548
"Ebony Tread"..... *369
English Combination Non-Skid..... *550
Expense, Monthly..... 605
Export Statistics, Japan..... 626
Fabric and Loom, Trautvetter Bias..... *603
Fabric Loom, Automatic..... *538
Fabric Tests Shown by Lantern Projection. *429
Fabrics, Apparatus for Impregnating..... *414
Fabrics, Standard..... *163
Fabrics, Statistics..... 165
Famine in Switzerland..... 36
Filler, Rubber..... *369
Flap-Making Machine..... *293
"Giant," 12 Inches Width..... *307
Hydraulic, Vulcanizing Mold and Press.... 350
Industry, Progress of..... 369
Inflator Valve, Rubber Covered..... *353
Kokomo "Kord" Bicycle..... *549
Lancaster Wire Grip..... *549
Lock, Rubber-Lined Safety..... *165
Machine Drum, Gammeter's..... *231
Manufacture, Continuous Process..... *230
Mattson Hand-Made *245
Mileage Chart, Goodyear..... 445
Mold, Electric *232
Mold, New Open Cure..... *540
Mold Patent (Thropp) Not Sustained..... 165
Molds, Non-Skid, Machine for Engraving.. *539
New Twelve Inch..... *550
Order, Large, Placed in Japan..... 198
Patent Litigation, Grant Solid..... 430
Plant, Modern, Routing of Materials in... *548
Press, Southwark Solid..... *65
Record, Remarkable 706
Repair Air Bag..... *671
Repair Materials 242
Repair Patch, Dobbins..... 370
Repairers, Schools for..... *533
Rim Standards, British, and American Sizes. 474
Rims (Solid) Applying Hard Compound to.. *540
Rims, British Standard Solid..... *604
Simmons *245
Sizes, Pneumatic, European..... 404
Solid, Drilling Machine..... 350
Spring, Jones' Pneumatic..... *296
Testing Tank, Improved..... 369
Texts ..... (*Editorial*) 332
Trade, Notes of..... *24, *73, 431
Trade, Notes and Personals..... 558, 560
Tread Machine, Birmingham Pneumatic.... *177
"Sculptured," The Triumph of (*Editorial*) 218
Treads, Three New Initialed..... *369
"Usco" *245
Vacuum Cup Shock Absorbing Liners..... *307
Valve, Double Seal..... *369
Valve, Kahn *671
Vulcanizers, Automatic Control of Time, Temperature and Exhaust in.....*530, 531
Vulcanizing Bag, Pneumatic..... *415
Vulcanizing Mold and Press, Hydraulic.... *122
Wires, Presto-Torch for Brazing..... *370
Tires, Aeroplane 605
And the Rubber Supply.....(*Editorial*) 217
And Tubes, Empire Red..... *549
And Tubes, Standard Pneumatic..... *430
Automobile, Rubber Armor for..... *496
Color in .....(*Editorial*) 398
Cord, and Cord Tire Fabrics.....*527, 529
Cord, for Aeroplanes..... *17
Firestone Truck, Adapted to Railway Tracks. *493
Hood and Puritan..... *671
Large Single Versus Dual Solid, for Rear "Truck Wheels".....(*Book Review*) 543
Machines for Reeling Bias Fabric Strips for. *602
Molding Pneumatic *477
News, Notes and Personals.....494, 496
Pneumatic, Method of Making a Cord Carcass for..... 350
Puncture Proof *550
Rubber, Foreign Imports Duties on..... 342
Rubber, Imported from Brazil..... 44
Rubber, in Brazil 93
Rubber, in Guatemala..... 690
Spain as a Market for..... 52
Tobacco Pouch, "All-Together"..... *670
Rubber-Lined *608
Toilet Seat, Vulcalose, Sanitary Rubber..... *668
Toy Balloon Inflating Machine..... *600
Traction Belt for Motor Cars, Non-Skid..... *420
"Tractive Resistance to a Motor Delivery Wagon on Different Roads and at Different Speeds" .....(*Book Review*) 610
Tracy, R. B. .....(*Portrait and Sketch*) 307
Trade, American Rubber, News Notes and Personals 301
Directory of Central America and the West (*Book Review*) 175
Marking Fabrics and Proofed Rubber Goods, Machine for *348
Marks and Designs.....95, 150, 205, 259, 260, 319, 384, 385, 445, 510, 511, 573, 574, 633, 634, 692, 693
Notes and Personals.....28, 29, 30, 74, 77, 80, 134, 185, 241, 247, 362, 423, 489, 496, 553, 613, 618, 672, 677
Notes, European 315, 378, 439
Tire, Notes of..... *24, *73, 431
Opportunities (*See Opportunities*).
Press and Our Present Problems of Business 339
Publications, New.....14, 69, 124, 176, 234, 286, 351, 416, 484, 544, 610, 664, 665
On Laboratory Apparatus and Supplies.... 346
Trautvetter Bias Fabric and Loom..... *603
Traveling Case, "Utility Adapto"..... *547
Tree, Rubber, The Largest..... *652
Trenton Rubber Trade.....33, 83, *140, 191, 249, *310, *374, *435, 499, 564, 623, *681, 682
Trewin, J. R., Death of..... 612
Trinidad and Tobago, Rubber Export Statistics 148
Truss, Infant's All-Rubber..... 126
Tube Connector, "Universal" Reinforced..... *546
Double Service Non-Inflatable..... *671
Tubing Machine, Allen Ten-inch..... *348
Machine Head, Royle's..... *540
Rubber, Highest Priced in the World..... *125

U

Uganda, Rubber Export Statistics, 1914 and 1915 148
Ule, Ernst, Death of 240
Umbrella Hanger, "Audubon"..... *172
"Tidy," New Device..... *238
United Kingdom—Imports and Exports of Crude and Manufactured Rubber....44, 103, 156, 214, 321, 392, 457, 520, 582, 642, 701
United States, Crude Rubber Statistics for 1915 262
Custom House Statistics.....98, 323, 389, 517, 578, 638, 697
Hendrick's Commercial Directory of (*Book Review*) 69
Import Statistics of Rubber into, for 1913 and 1914 54
Monthly Rubber Importation Statistics for Six Years 391
Plantation Rubber Statistics..... 513
Rubber Co., Annual Report of..... 359
Rubber Import and Export Statistics....44, 98, 155, 213, 268, 326, 392, 456, 519, 641, 699, 700
Statistics, Value of Annual Production of Rubber Goods 54
Universal Tire Building and Wrapping Machine *178
Universality of the Rubber Heel..... 567
Unprofitable Infringement No Excuse (*Editorial*) 397

V

Vacuum Clip Hanger, New..... *607
Cup, New Uses for..... *546
Desiccator *597
Hanger, "Cantilever Flyfoot"..... *546
"Vacu-Vac" for Flowers..... *297
Valve, Check, for Suction Flasks..... *537
Hydraulic, for Rubber Mills..... *292
Venezuela, Balata and Rubber Export Statistics 203
Videto, Theodore H., Death of....(*Portrait*) 356
Violin Chin Rest, Williams' Patent..... *480
Vincent, Frank, Death of..... 551
Viscosity Instrument *469
Vodka, Artificial Rubber from..... 224
Vulcanization Experiments.....289, 344
Of Caoutchouc and Its Regeneration..... 658
Of Rubber, Variation in Rate of..... 11
Vulcanized Rubber, Properties of..... 466
Vulcanizer, Miller's Boot and Shoe Repair... *177
Premier Electric *538
Press, French, for Tire Casings..... *602
Gammeter's Vertical *661
Peter D. Thropp's..... *66
Splice, Inner Tube..... *413
Vulcanizing and Dipping Apparatus, Price's. *292
Apparatus, Footwear *233
Brush Bristles Set in Rubber..... *600
Press, 15-Ton Duplex..... *538
Rubber, Process of 115
Tubing or Hose in 500-Foot Lengths..... *661

W

War, Effect of, on Chemicals and Compounding Ingredients, Normal vs. War Prices. 110
European Rubber Trade After..... 465
Is Making! What a Mountain of Scrap the (*Editorial*) 7
Rubber as Related to the..... *110
Washer Cutter, Advance..... *476
Washing, Wholesale Rubber..... *39
Waste Material Dealers, National Association of, Annual Meeting (*Portrait of Louis Birkenstein*) 361
Watch Holder for Steering Wheel..... *297
Protector, Rubber *607
Water Bottle, Rubin Duplex..... *297
Bottles, Hot, Collapsible Core for..... *600
Waterproof Clothing Factory, New, in Amsterdam 198
Fabric and Garments, New "Silvarein".. *660
Folding Seat *125
Waxes, Paraffin, Melting Point of, Apparatus for *200
Weatherproofing Clothing *70
Weatherstrip, McCormick 174
Weaves, Handbook of.....(*Book Review*) 234
Weber, Aaron D., Death of..... 486
Weeds, German, Rubber from..... 571
Weisling, William W., Death of..... 422
Welding Rims by Electricity *473
Welfare Department, Fisk Rubber Co. Opens. 368
Work in a Modern Rubber Shoe Factory... *189
Western Notes of Rubber Trade..*252, 436, 500
Williams, Charles H., Death of..... 180
Wills, Arthur Jackson (*Portrait and Sketch*) 674
Automatic Jar Ring Cutting Lathe..... *120
Overflow Trimmer, Installation of..... *177
Wind-Shield, Rear, Ford *609
Wire, Rubber Covered, Machine for Panning.*292
Wiring System, Concentric..... *531
Work, Joseph W.....(*Portrait and Sketch*) 133

Y

Yoshida, Y., Death of..... 612

*Illustrated.